Review research paper

# LEARNING BY DOING: THE BENEFITS OF ADOPTING AN ONLINE NEGOTIATION SUPPORT SYSTEM INTO AN ENGLISH FOR ACADEMIC PURPOSES COURSE

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**Abstract.** *The paper reports on the benefits of imbedding an online negotiation support system (NSS) into the experiential learning framework of an English for Academic Purposes (EAP) course. Proponents of experiential learning projects in the second/foreign language classroom emphasize the benefits of learning by doing. To test the claim, the performances of students in two advanced level EAP courses at Carleton University, Ottawa, Canada, were compared. One course was developed with the principles of content-based (CBI) instruction, with input primarily from academic texts; the other course also used content-based instruction but was enhanced by an experiential learning project for which the online negotiation system was adopted. Participation in the project provided a novel learning experience for second language learners at Carleton, with counterparts from universities in three additional countries (Austria, Poland, and Taiwan) also participating. A statistical analysis of student grades showed that the students in the EAP course enhanced by the experiential learning project obtained significantly higher grades on the final assignment in comparison to the students in the "traditional" CBI course.*
*The paper also demonstrates that this teaching and training system enhances learning by promoting learner autonomy, critical thinking, and academic language development. Relevant aspects of the experiential learning project led to enhanced learning outcomes, supporting the claim that learning by doing benefits language acquisition. The paper proposes a new experiential learning model, applicable to ESP/EAP instruction, i.e., the sustained-content experiential learning model which can be applied to any project that emphasizes learning through direct experience. The model depicts the importance of sequencing academic content tasks that build on each other allowing learners to accumulate knowledge and language and prepare them to engage in a meaningful, authentic communication. It also illustrates the importance of using reflection as an effective learning tool that helps develop critical thinking and analysis, skills necessary for academic success.*

**Key words**: *ESP/EAP, online negotiation support system, content-based instruction, sustained-content instruction, experiential learning*

## 1. INTRODUCTION

Over the last twenty years, the demand for receiving degrees from universities where English is the language of instruction has been growing at a high pace among international students. Canada ranks third in global student attraction after the United States and Australia. Between 2009 and 2019 the international student population tripled. Nearly 50% of international students study in Ontario; 60% intend to become permanent residents (statista.com). Those who return home after graduation have enhanced opportunities to find employment with companies and institutions that need people with English language skills.

The study described in this paper was conducted at Carleton University in Ottawa, Ontario. Like many other English-speaking Canadian universities, Carleton receives many applications from overseas students. One of the admission requirements is adequate level of English as determined by internationally recognised tests, i.e., TOEFL, IELTS, DUOLINGO. Those applicants whose test score falls below the required level are offered an opportunity to take English for Academic Purposes (EAP) courses. The courses aim to bring non-native speakers of English, to the level of academic language proficiency where English is no longer a barrier to success in their programs of study. The courses use methodological frameworks imbedded in learning theories and teaching methods that promote development of academic communication skills, learner autonomy and critical thinking. They are designed using instructional approaches of content-based instruction (CBI) and, more recently, experiential learning. Determining which of the two approaches is more effective in teaching EAP motivated the study which compares the learning outcomes – measured by students' final grades – in courses that follow the CBI approach with courses that follow the experiential learning approach.

The instructional models of CBI and experiential learning are rooted in the same linguistic and cognitive theories and reflect the interactional view of language acquisition (Richards & Rodgers, 2014). Both aim to integrate content and language learning. Typically, they use tasks as a pedagogical tool. The main difference between the two approaches is that CBI relies predominantly on input from texts, while in experiential learning, the focus is on "learning by doing and reflecting". What follows is a brief overview of content-based instruction and experiential learning.

### 1.1. Content-based instruction

Content-based instruction (CBI) is one of the "spin-offs" of communicative language teaching (C. R. Rogers & Freiberg, 1994). It aims to develop communicative competence in the target language along with content knowledge in a specific subject area, (Oxford, 1993). CBI provides a flexible format and allows for the inclusion of a variety of teaching techniques, practices and strategies, such as project-based, task-based and experiential learning. The methodology is based on the premise that language is most effectively acquired through exposure to content and discourse features of context. Focus on the development of sociolinguistic rather than grammatical competence is central to CBI (Stryker & Leaver, 1997).

CBI courses at the tertiary level aim to develop academic literacy, that is, the ability to understand complex linguistic structures, interpret and analyse information and deconstruct concepts presented in academic texts. Courses at this level use extensive reading and listening materials to expose learners to the academic discourse patterns and sociolinguistic conventions. The teaching strategies involve careful planning of tasks that target linguistic and

critical thinking skills and guide students step-by-step through processes of information gathering, evaluation and synthesis. The tasks are planned around the integration of the four language skills and focus on engaging students in meaningful and authentic language use. (Brinton & Snow, 2017; Kasper, 1997; Marcia Pally, 1997).

The most commonly used CBI model is the theme-based model (Dueñas, 2003). Central to a theme-based course is a theme, which serves as an organizing principle for course design. There are two types of theme-based models:

1. *The thematic units model.* Courses that follow this model are designed around a series of thematic units. The teacher selects authentic texts for each topic and prepares tasks and activities aimed at developing learner's knowledge of the topics and academic language (Brown, 2007; Kasper, 1999).

2. *The sustained-content model.* Courses that follow this model are designed around one umbrella theme, which learners study over the duration of the term. The teacher selects a variety of texts on the theme and prepares tasks and activities that help learners develop a certain amount of expertise on the subject while developing academic language and critical thinking (Marcia Pally, 1997).

Both models offer an appropriate framework to prepare students for the challenges of studying at English language universities. The sustained-content instruction has the advantage of bringing students closer to authentic academic study as the courses simulate mainstream university classes. Research indicates that the exploration of one subject area over a longer period of time builds not only content knowledge and language but also lends itself to the development of critical thinking (Kasper, 1997; M. Pally, 2000). Through reading, listening, writing, and speaking about one theme, students develop academic language and study skills which are transferable to mainstream courses.

### 1.2. Experiential learning

The following section gives a brief overview of learning theories that promote learning through experience. The methodological frameworks of learning through experience were first developed for professional training and later adapted for language instruction.

In the first half of the 20th century, Dewey (1938) formulated a scientific method of learning. His work laid the foundations for project-based learning, a teaching strategy that challenges students to solve problems, thus making project participation a meaningful and effective experience. Building on Dewey's work, Kobl (1984) formulated experiential learning theory, which posits that experience is a source of learning and development, and that knowledge is created through the transformation of experience. He proposed a four-stage model of the learning cycle: (1) *experience* (involvement in the experience), (2) *reflective observation* (reviewing of the experience), (3) *abstract conceptualization* (logical analysis, critical thinking), and (4) *active experimentation* (using new ideas learned from experience). Kobl saw learning as a holistic process grounded in real life experiences. A crucial element of his model is reflection, i.e., learning takes place not so much through doing but "through reflection on doing" (op. cit. 1984, p. 38). According to Knutson (2003, p. 54), "experience-based, project-based, and task-based become experiential when elements of reflection, support, and transfer are added to the basic experience, transforming a simple activity into an opportunity for learning". Moon (2013) further explored the relationship between experiential learning and reflection in the second language acquisition context and pointed out that both

imply emotional involvement, which indicates a deeper approach to learning and greater effectiveness.

The proponents of experiential learning projects in second language classroom indicate that the learners' personal involvement in the process, both emotional and cognitive has positive effect on language and cognitive development (Moon, 2013; C. R. Rogers & Freiberg, 1994). Although the projects may be based on individual work, the learning benefits of working collaboratively in the target language have been emphasized because collaboration requires the use of a language's social and communicative functions (Firth, 1995; Wilhelm, 1999). According to socio-cognitive theory of cognitive development (Vygotsky, 1997), knowledge is a social construct and cognitive development is the result of social interaction. Sharing ideas and perspectives and collaborating on joint problem solving promote social development and help students progress from a lower to a higher level of language skills and knowledge.

Experiential learning projects are often built around one or more problems that students need to analyze and solve. The benefits of implementing problem-solving techniques in language courses have been widely discussed. Burke (1996) argues that problem-solving makes language activities meaningful as it relies on students' natural tendency to figure things out, which enhances language acquisition. Norman and Schmidt (1992) point out that problem-based learning contributes to intrinsic motivation and develops self-directed learning skills, which tend to be maintained. Thomas (2000) shows that students in schools, which implemented problem-based learning demonstrated significant improvement on standardized tests of academic achievement.

There are many types of experiential learning models which are used as a classroom management tool (Moon, 2013) in projects or syllabi. Although they differ depending on the context, teaching philosophy and the amount of autonomy given to the learners (Fleming & Walter, 2004; Mohan, 2015), they all focus on employing different forms of active learning including, project-based, problem-based, and task-based learning (Blake, 2016; Ellis, 2003; Skehan, 2003; Vygotsky, 1997; Willis & Willis, 1996). Examples of experiential learning models are given below:

1. *The task-based projects model* proposed by Legutke and Thomas (1991) focuses on a research project. It begins with the preparation of second language learners for group work and the explanation of the concept of communicative language teaching, followed by topic selection, research and data collection, presentation and evaluation. Tasks are designed by the teacher, but the students have certain amount of autonomy in deciding on the topic, planning the project, and the use of materials.

2. *The experiential syllabus model*, proposed by Kenny (1993, p. 436) – a strong proponent of the learners' autonomy—is designed to "facilitate autonomy itself". The course's main objective is learning to write an investigative report. The students move gradually from the initial preparatory task-based work (theoretical foundations) to experiential work. The cycle of learning involves initiating a piece of work, formulating themes, and clarifying investigative research, carrying out pieces of work, discovering solutions, realizing personal growth, and defining new fields. Kenny's model gives the students full autonomy over the learning process.

3. *The content-based experiential learning model* proposed by Mohan et al. (2015) defines Kobl's cycle of learning in terms of discourse and focuses on the relationship between context, discourse, and academic language development. The four phases are labelled using different types of discourse (action discourse, particular reflection:

reporting, general reflection, and testing new concepts against experience). The model is based on the design of two mainstream school and college courses which employed experiential learning – one on magnetism and the other on marketing. The courses have a theory-practice structure; they use a wide range of discourse types and a series of academic content tasks.

To make the distinction between mainstream courses that teach content and courses that teach language through content the author proposes the fourth type of an experiential learning model:

> *The sustained-content experiential learning model.* Like in the other models, the learning begins with preparatory tasks aimed at language development (academic discourse) and content (theoretical foundations) and moves gradually to learning through experience.

Advocates of experiential learning in second language classrooms stress many benefits of learning by doing. However, to the best of the author's knowledge, no comparison of language courses that use content-based models and the courses that implement experiential learning was done.

### Hypothesis

Consideration of the benefits of experiential learning, provided grounds for the following hypothesis:

> *Sustained-content experiential learning gives better learning outcomes*
> *than sustained-content learning, as measured by students' grades.*

To test the hypothesis the grades of students enrolled in two advanced level EAP courses, which employed two different methodological frameworks, i.e., the sustained-content and the sustained-content experiential learning, were compared. The sustained-content course is later referred to as the text-based learning (TBL) course. The sustained-content experiential learning course is further referred to as the experience-based learning (EBL) course. Both courses used academic texts and were designed around tasks and problem-solving activities aimed at developing a deeper level of understanding of the subject area, critical thinking skills and language. However, the TBL, relied on the use of texts as the main source of input and in EBL, an experiential learning project was added. The project work in EBL involved the use of digital technology, namely, an online negotiation support system. The contribution of digital technology to experiential learning projects in language classes is discussed below.

### 2. DIGITAL TECHNOLOGIES IN LANGUGE TEACHING

Digital technologies in second language education have undergone many stages of development from the behaviourist and communicative to the integrative stage. Since their onset, digital technologies have created new opportunities for involving second language learners in collaborative projects between groups of students in different locations. Because of its ease of use, email-based communication was found particularly useful early on (Warschaer, 1996) and the pedagogical advantages it offered were recognized by teachers and researchers (Inoue, 1999; Kroonenberg, 1995). More recently,

computer-mediated communication tools, such as chatrooms, and computer-assisted language learning, tutorial software and internet-based activities, entered the L2 classrooms. Their incorporation into language courses supports the widely accepted notion that knowledge is constructed through communication and interaction.

However, these technologies have also been criticized for an ad hoc use and lack of clear pedagogical focus or sense of direction (Barker, 2000). To be successful, projects that involve communication between participants in different locations require close collaboration not only between students but also between teachers who have to jointly coordinate every aspect of the project, including preparation of tasks and assignments, structuring of activities, creation of groups, matching students, close coordination of students' work, and monitoring interaction. (Kersten and O'Brien, 2011). A recently conducted study showed that ESP practitioners tend to use basic, rather than more advanced technology; they use technologies that they are familiar with. The authors of the study suggest that integrating more advanced technology in teaching practices may require training (Constantinou & Papadima-Sophocleous, 2020). As will be demonstrated below, integrating the online negotiation support system Inspire did not require special training.

## 2.1. Computer-mediated communication and computer assisted language learning

Over the last 30 years numerous computer-mediated communication (CMC) and computer-assisted language learning (CALL) programs have been developed for L2 learners. Recent studies of technology use for language teaching show that task-based language teaching and technology mediated instruction are "a natural match" because the two approaches "share a series of theoretical antecedent, including project-based, content-based and experiential learning (M. Thomas, Reinders, & Warschauer, 2013, p. 5).

In his review of digital technologies promoting L2 development, Robert Blake (2016) examines the advantages of computer-mediated communication and computer-assisted language learning programs and activities, concluding that to be effective these technologies should be used within the framework of task-based language teaching (TBLT) with roots in experiential learning (Gonzalez-Lloret, 2015). Relevant tasks are defined as goal-oriented activities, which involve problem-solving, analysis and sharing of ideas which foster authentic language use (Blake, 2016; Mayo, 2015; M. Thomas et al., 2013; Willis, 2021). To be effective, the activities must be carefully planned and structured (Skehan, 2003). The principle of careful preparation and planning applies to the use of all types of digital technologies. Courses that use technology should thus involve putting together pedagogically sound tasks supported by the specific technology and sequencing of activities within the tasks (Blake, 2016; M. Thomas et al., 2013).

In the case of ESP and EAP, technologies developed and used for training students and professionals in different academic fields may be used to enrich and enhance the ESP/EAP students' learning experience. The technologies developed for solving and/or simulating real-life problems incorporate professional knowledge and provide an authentic setting for learning. They may require preparation of additional materials and initial guidance by instructors, but they provide an environment that students may find attractive and stimulating. They can be adapted to ESP/EAP in a similar way as academic texts, but they add an interactive component (Kersten, 2017).

## 2.2. Analytical and knowledge-based systems

Today, many web-based systems provide analytical capabilities and knowledge in addition to their communication and interaction functions. Of particular interest to language instructors should be those online analytical and knowledge-based systems that support collaborative work and provide an environment in which students can engage in purposeful communication that aims at joint problem solving. Examples of such systems are group decision support systems (e.g., groupVision; Prism GDSS) and negotiation support systems (e.g., SmartSettle; Negoiist; eNego). One of the negotiation support systems, Inspire (https://invite.concordia.ca/inspire/about.html)*, was used in the experience-based learning (EBL) course discussed in this paper.

Negotiations are, in essence, problem-solving activities that rely heavily on communication. Their inclusion in language classes can therefore be an effective way of practicing language. Both face-to-face and online role simulations make communication purposeful and meaningful, as the learners "use language to achieve a real outcome" (Willis & Willis, 1996 p. 53). However, certain aspects of electronic negotiations render them more beneficial for learning than face-to-face exchanges. To begin with, they are more realistic – they give the learner much greater control of the process and the outcomes because the instructor is removed from the activity. Also, because negotiations are asynchronous, they give the participants as much time as they need to respond to their counterparts and thus encourage reflection. Furthermore, the system records all the negotiation activities, so when the process ends, the participants can access the records and reflect on their experience. Finally, the anonymity, the fact that negotiating counterparts do not know each other, removes the element of playing it "safe" associated with face-to-face negotiations with classmates (Holtom & Kenworthy-U'Ren, 2006).

## 3. EAP COURSES AT CARLETON UNIVERSITY

English for Academic Purposes Program at Carleton University offers three levels of EAP courses: introductory, intermediate, and advanced. Each course is a full credit course and involves six hours of instruction per week over the period of one term (13 weeks). Concurrently to taking an EAP course, students are allowed to take a limited number of mainstream courses in their program of study. At the introductory level, they can add one course from the degree program at the intermediate level – two, and at the advanced level – three. Upon successful completion of the advanced level course (70% exit requirement), they may become full time university students. The participants in the study were enrolled in two advanced level EAP courses, one used the text-based learning (TBL) model and the other experience-based learning (EBL) model.

### 3.1. The TBL and the EBL models

The text-based learning (TBL) and the experience-based learning (EBL) are two formats of the advanced level EAP course. Both were prepared and taught by the same teacher. Both were designed within the framework of sustained-content instruction, with the focus on the development of academic language and critical thinking skills through the exploration of the course theme. The instructor was responsible for choosing the theme, selecting reading and listening materials, preparing language and content focused

tasks, activities, and assignments, as well as assessing students' performance. There was no examination at the end of the term; the final grade was the average of the grades obtained by the students throughout the term.

### 3.1.1. The TBL and the EBL course design: similarities

Both courses had the following main components: (1) coursepack, (2) research project, (3) analytical skills practice module, and (4) final assignment.

1.  The course-pack was divided into three sections: a) language activities and guidelines for writing critiques; b) theoretical readings from literature on the course theme accompanied by language and skills development activities; and c) cases for practicing analytical skills.
2.  The independent research project had three objectives: (1) to build the students' knowledge of a specific aspect of the course theme or of their academic interest; (2) to develop library research skills; and (3) to promote independent learning.
3.  To practice analytical skills the learners were given different cases or situations to analyse, using the theoretical concepts introduced in the preparatory phases of the course.
4.  The final assignment was a report. It was an in-class, open book assignment in which the students analyzed a case.

### 3.1.2. TBL model: course description

The umbrella theme for the TBL course was *diffusion of innovations*. The course followed a sustained-content model and had a five-phase structure. The tasks and activities within each phase built on each other, developing learners' understanding of the content and language. There was a progression of difficulty of coursework between phases and each phase prepared the learners for the tasks in the next phase. Parallel to work done in the classroom, each student conducted an independent research project. The TBL course design is depicted in Fig. 1.
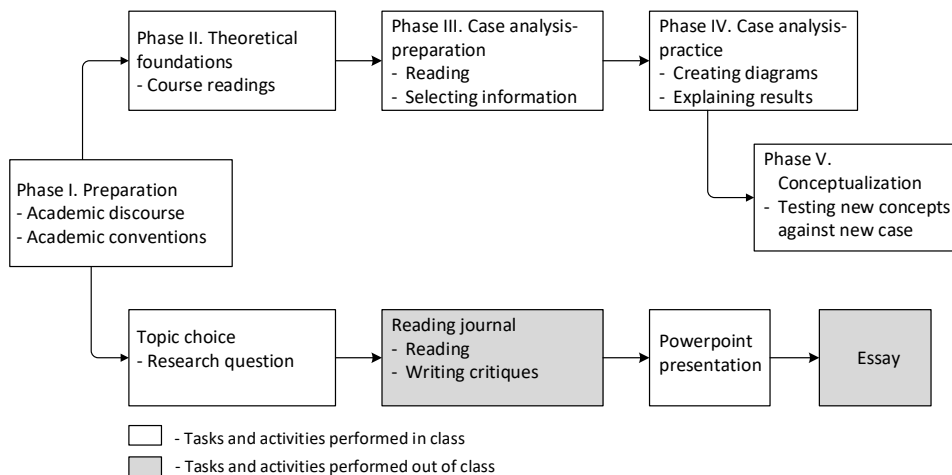


Fig. 1. The TBL course design: a sustained-content model

Phase I: *Preparation* focused on the introduction of specific aspects of academic discourse, including: (1) features of academic books, journal articles, and critiques; (2) language of reporting, evaluation, and analysis; and (3) academic conventions and academic integrity policies. This phase prepared the students for both the independent research project as well as for the course readings and assignments.

Phase II: *Theoretical foundations* introduced course readings on theory of innovation diffusion (E. M. Rogers, 2001) accompanied by language tasks and activities aimed at the development of academic language and study skills. The readings explained basic concepts and definitions related to the topic and provided examples and analyses of successful and failed innovations. The illustration of how theoretical concepts are used to analyze cases prepared the learners for the next phase.

Phase III: *Case analysis-preparation* involved analyzing two innovations: the telegraph and the printing press. The same procedure was followed in both cases, i.e., the students read the text about the history of the innovation, took notes, and discussed its content in groups. Then, working in groups, they selected information that would be used to analyze its diffusion and moved on to phase four.

Phase IV: *Case analysis-practice* involved working in groups to prepare graphs that depicted innovation diffusion (first, the telegraph, then the printing press). Finally, volunteers presented the graphs with explanations in front of class to get classmates' and teacher's feedback; class discussion followed. These tasks prepared the students for the final phase.

Phase V: *Conceptualization* was the final assignment, a report that tested the ability to apply theoretical concepts to the case, as well as language and academic conventions. The students were given reading on the history of the radio. After acquainting themselves with the case, they discussed radio's diffusion in groups. Then they wrote a report following the guidelines that were provided. They were encouraged to use all relevant materials used over the term.

The independent research project was conducted mostly out of class. Each student had to: identify the topic that he/she intended to investigate, formulate a research question and search for sources. Once a week, over the period of five weeks, each student submitted a reading journal entry. At the end of the term, each student gave a presentation and wrote an essay.

### 3.1.3. EBL model: course description

The umbrella theme for the EBL course was *decision making and negotiations*. The course followed the sustained-content experiential learning model. The tasks and activities within each phase were sequenced in order to build content knowledge and language and prepare the learners for hands-on experience with online negotiations. Each student concurrently conducted an independent research project. The EBL seven-phase model is shown in Fig. 2.

The course began with Phase I *Preparation*, which was the same as in the TBL course. It prepared learners for course readings and assignments, including the independent research project.

Phase II *Theoretical foundations* comprised readings on the course theme. Students first read a chapter on decision making (Mayer, 1982) and then a chapter on negotiations (Lewicki, Barry, Saunders, & Minton, 2003). While working on the readings, the learners

engaged in tasks and activities aimed at developing content knowledge, as well language and learning skills. Each book chapter included cases of decisions and negotiations and their analyses. The analyses provided an illustration of how theoretical concepts can be used to explain specific decisions or negotiation outcomes. The learners applied skills and knowledge learned in this phase in the following phases.

Phase III *Hands-on experience* involved two face-to-face bilateral negotiations between teams of three participants. The first one was a contract negotiation between a young writer and a publisher. The second concerned a scarce supply of a fruit that two companies needed and had to come to an agreement to obtain it. In both cases, each team received a detailed description of the situation and had to prepare a team strategy before entering the talks.
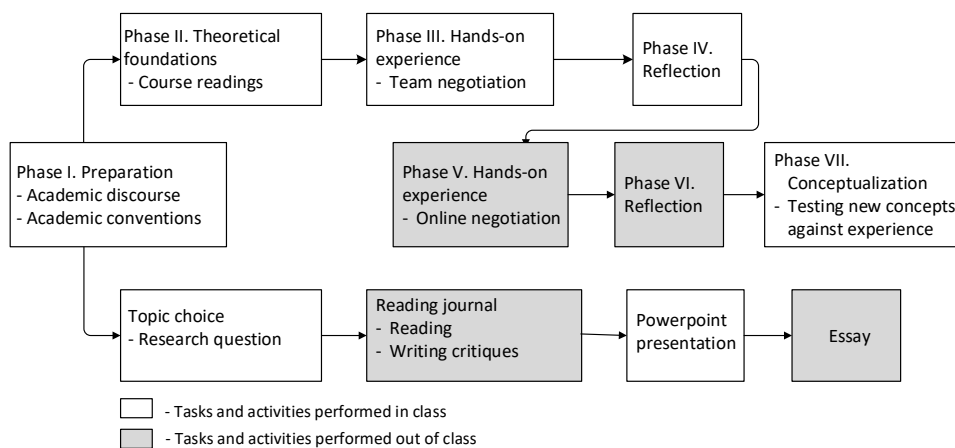
Fig. 2 The EBL course design: a sustained-content experiential learning model

Phase IV was an informal written *reflection* on the process and outcomes of the two negotiations.

Phase V *Hands-on experience* involved asynchronous online negotiations conducted individually by each student (see Section 5).

Phase VI *Reflection* had two components: an ongoing reflection on every step of the negotiation which was recorded in a negotiation journal as well as an evaluation, based on a short questionnaire embedded in theory of negotiation analysis, where the participants had to evaluate their own and their partner's behavior and the negotiation process. This work led directly to the next phase.

Phase VII *Conceptualization* involved writing a report that tested the ability to analyze negotiations using theoretical concepts, as well as academic language and academic conventions. It was an open book assignment. The students were given guidelines and encouraged to use materials introduced over the duration of the course.

The independent research project was the same as in the TBL section.

### 3.1.4. Comparison of TBL and EBL instructional models

The preparation phase was the same in both courses (see Figs. 1 and 2), and so was the general flow of activities from theory to practice.

In both courses, readings from literature in their respective fields were used to build a knowledge base and provide language input that was necessary for analyzing cases and completing assignments. The activities were designed around content tasks that build on each other allowing learners to accumulate knowledge and develop academic language. In both courses, the format of tasks and activities based on course readings was the same or similar. So too were the major assignments, including the final report and the independent research project.

Both themes span over a variety of academic disciplines, and thus were considered relevant to the diverse EAP student population. Furthermore, the themes tapped into the students' background knowledge as everybody has experience with innovations and everybody has a negotiating experience. Research shows that background knowledge or schemata learned in the first language helps learners understand texts in the second language. Moreover, background knowledge has been shown to give confidence and contribute to active participation in class (Carrell, Devine, & Eskey, 1988; Carrell & Eisterhold, 1983).

The difference in the learning experience between the two courses occurred after the second phase, i.e., theoretical foundations. In the TBL course, the tasks continued to be designed in the format of the sustained-content model. The students were given cases to read, discussed them with the classmates, worked in groups, created diagrams, and provided an assessment of how and why each innovation diffused successfully. The final report – the conceptualization phase, was based on a new case: a reading on the history of the radio.

In the EBL course, the analytical skills were practiced using the sustained-content experiential learning model, characterised by learning by doing and reflection. In Part 1 of the hands-on experience phase, the students engaged in face-to-face negotiation role-plays conducted in teams of three. They read case descriptions, discussed them, decided on the strategy and bargained with the counterparts' team. Then they wrote a reflection in which they commented on the process and outcomes. Part 2 of the hands-on experience phase involved online negotiations. It was a bilateral, anonymous, asynchronous negotiation supported by the negotiation system's analytical tools. Throughout the negotiation, the students kept a negotiation journal in which they reflected on their own and their counterpart's behaviour and strategies, on their reactions to what was happening, their expectations, etc. When the negotiations ended, the students filled in a short questionnaire in which they evaluated their negotiation: a guided reflection. The final report was based on this personal experience.

## 4. Learning by Doing With an Online Negotiation Support System

As mentioned earlier, online analytical and knowledge-based systems that support collaboration can be successfully incorporated into ESP/EAP courses at the tertiary level of language instruction. Such systems provide opportunities for students to engage in meaningful interaction based on joint problem solving and learning by doing. One of these systems, Inspire, was used in the EBL course.

### 4.1. *Inspire* - an online negotiation support system

Inspire system was developed at Concordia University, Montreal, Canada, and used to give business students hands-on experience negotiating with business students in different countries. The system accepts requests from instructors of other than business courses. Following a request from the author of the paper, the EBL students were registered to participate in international negotiations. They negotiated with business students in three universities, i.e., the University of Vienna, Vienna, Austria, the University of Economics, Katowice, Poland and National Taipei University of Business, Taipei, Taiwan. In other words, all the participants were non-native speakers of English.

The Inspire negotiations fit the EBL course theme *decision making and negotiations*. Having EAP students participate in the negotiations created an opportunity to enhance the course delivery by providing a unique experience of communicating with students located in three countries. The system allowed the participants not only to communicate with their counterparts to resolve their differences, but also provided tools that encouraged the students to analyse and reflect on their and their counterparts' actions at every phase of the negotiation.

#### 4.1.1. The case

The case that was assigned by the Inspire team was a contract negotiation between an agent representing a singer and song writer, and a manager representing an entertainment agency. The Inspire team matched the students in these one-on-one negotiations and provided a detailed description of the role that they were going to play: an agent called Fado, who represented Ms. Sonata, a young songwriter and singer, or a manager of an entertainment agency (WorldMusic Inc.), called Mosico. Both parties were interested in signing the contract, but there were differences in their contractual preferences (explained in their role descriptions). In order to resolve their differences, they had to engage in negotiations. The purpose of the negotiation was to agree on the terms of the contract that would be acceptable to both parties.

The negotiation focussed on four issues that the agents needed to agree on: (1) the number of concerts per year; (2) the number of songs per year; (3) royalties; and (4) the signing bonus. Within each issue there were between three and four options (e.g., for issue "No. of concerts" the options were five, six, seven and eight concerts per year).

#### 4.1.2. The negotiation process

Inspire negotiations are based on the three-phase model of negotiations, i.e., preparation, conduct of the negotiation, and post-negotiation. In the preparation phase the participants are asked to read an example of online negotiations, watch a demo, and acquaint themselves with the system. They subsequently read the case which introduces both sides of the negotiation and describes the preferences of the party they represent.

The preferences of the principals (Ms. Sonata and WorldMusic Inc.) are presented both verbally and in the form of a bar graph. Fig. 3 shows Ms. Sonata's preferences for the four issues. The explanations and the bar-graph that Fado sees indicate that the most important issue for Ms. Sonata is the number of promotional concerts (she does not want to perform many concerts) and the number of songs; royalties and the signing bonus are less important. Four options of the issue "No. of promotional concerts" are also shown in

Fig. 3. For WorldMusic, the number of promotional concerts and the number of songs are also most important, but they want Ms. Sonata to perform the maximum number of concerts. Options for the other issues are shown in a similar form.
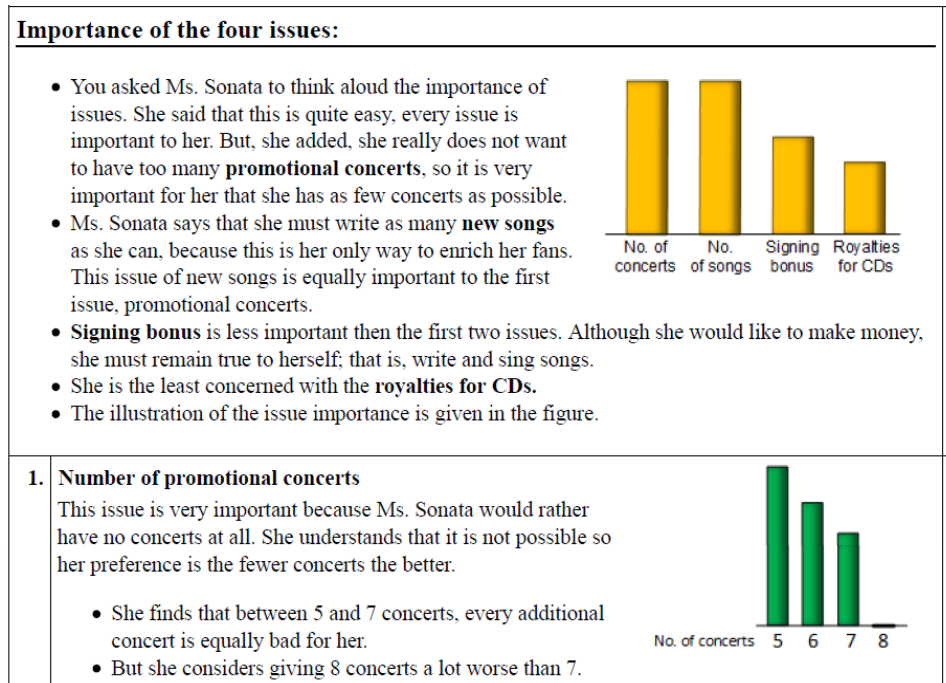


**Importance of the four issues:**

- You asked Ms. Sonata to think aloud the importance of issues. She said that this is quite easy, every issue is important to her. But, she added, she really does not want to have too many **promotional concerts**, so it is very important for her that she has as few concerts as possible.
- Ms. Sonata says that she must write as many **new songs** as she can, because this is her only way to enrich her fans. This issue of new songs is equally important to the first issue, promotional concerts.
- **Signing bonus** is less important then the first two issues. Although she would like to make money, she must remain true to herself; that is, write and sing songs.
- She is the least concerned with the **royalties for CDs.**
- The illustration of the issue importance is given in the figure.

1. | **Number of promotional concerts**

This issue is very important because Ms. Sonata would rather have no concerts at all. She understands that it is not possible so her preference is the fewer concerts the better.

- She finds that between 5 and 7 concerts, every additional concert is equally bad for her.
- But she considers giving 8 concerts a lot worse than 7.

Fig. 3 Importance of the four issues for Ms. Sonata

The preparation phase was done in-class to address any problems that might arise due to the fact that the negotiations were a new learning experience for the EAP students. First, they became acquainted with the system (demo, example), the case, their role in the negotiations and their role description. Then they rated issues and options, keeping in mind the preferences of the party they represented (Fig. 3). When making these decisions they engaged cognitive skills (learning and problem solving), they weighed what combination of issue options would bring the best results and considered which issues they might be willing to soften their position on. Moving through the preparatory tasks, the participants were immersed in rich negotiation environment with language input. They had to understand every step of the preparation process and follow instructions. (Not following instructions, a fairly common weakness, is not possible in Inspire). If a student had a problem understanding, then they could check the glossary or FAQ. Throughout this phase, the participants engaged in meaningful interaction with the system before they interacted with their counterparts.

During the conduct of the negotiation, the counterparts exchanged offers and messages. When one side submitted an offer, the other side received an automatic email notification.

Fig. 4 illustrates the beginning of the negotiation phase. Fado received the initial offer from Mosico; this offer rated only 40 (out of 100) for him. Using the information displayed on the screen Fado had to decide what counteroffer to send and what to write in the message to keep working with the counterpart on joint problem solving.



Fig. 4 An example of offers and counteroffers exchanges

Fig. 5 illustrates engagement in a meaningful communication aimed at providing arguments to justify one's own offers and at persuading the counterpart to make concessions. The transcript was very useful, not only during the conduct of negotiations but also for writing the final report.

The negotiation ends when an agreement is reached, one side terminates the negotiation, or when the time runs out.

In the post-negotiation phase, the system may suggest a better solution for both parties, and they may decide to accept it. Finally, the participants are asked to respond to the post-negotiation questionnaire regarding their negotiation experience, which prompts final reflection.

Fig. 5 An example of the history of offers and message exchanges

### 4.1.3. Online negotiations and experiential learning

A closer look at the Inspire negotiation phases shows that they resemble those of the experiential learning cycle. In the preparation phase the participants perform a variety of tasks that prepare them for negotiations. The conduct of negotiations corresponds to concrete personal experience, and the post-negotiation phase, to reflective observation.

In terms of active experimentation, conclusions cannot be formulated with any degree of certainty. However, students' responses to a short questionnaire showed that 81% would use the negotiation skills learned in the course in real life. More importantly for pedagogical purposes, however, the final reports indicate that the students acquired academic language and critical thinking skills that they will be able to transfer to other courses.

5. RESULTS AND DATA ANALYSIS

This section compares and analyses grades obtained by the students in the two courses.

### 5.1. Participants

All participants who were the subject of this study were EAP students enrolled in advanced level courses of the EAP Program at Carleton University. Approximately half of the participants were enrolled in the TBL course, and the other half in the EBL course.

For the purpose of this study, the number of students in two concurrently running TBL course sections were combined. Likewise, the number of students in two concurrently running EBL course sections were also combined. Students who missed one or more in-class assignments were removed from the sample. As a result, the TBL sample comprised 32 students, and the EBL sample had 35 students

The students in both courses came from similar cultural, linguistic and educational backgrounds – the TBL course had 11 Arabic speakers, 13 Chinese speakers and 8 speakers of other languages; the EBL course had 11 Arabic speakers, 17 Chinese speakers and 7 speakers of other languages. Most were in their early 20s.

### 5.2. Comparison of the grades

Students in both the TBL and EBL courses wrote seven assignments. Four assignments were written in class: a vocabulary test; a critique analysis; a short answer test; and a report/case analysis. Three assignments were written as homework: the diagnostic test, the independent research project, and the negotiation journal. For the purpose of this study, only the assignments written in class were taken into consideration.

The vocabulary test assessed the use of reporting verbs in context as well as citations in APA style. The critique analysis focused on analysing the content and the language of a book review.  The students were asked to identify the purpose of each and to make a list of positive and negative comments used by the author of the review. The short answer test was an open book test based on a book chapter; in the TBL course a chapter on *innovation diffusion* was used, and in the EBL course,  a chapter on *decision making and negotiations* was assigned. These were not new readings; they had been discussed in class for three weeks. The students had to locate answers to five questions and provide 150-200 words answer to each question by paraphrasing/summarizing information from the text and citing the source. The report/case analysis in the TBL course was based on an encyclopedia entry on the history of the radio. Using Rogers' diffusion of innovations theory, the students had to analyse the stages of the radio diffusion and write a report. The report/case analysis in the EBL course was the analysis of the students' experience with online negotiations for which they applied the concepts of negotiation analysis introduced in the course. The short answer test and the report/case analysis were graded on content, organization, language (range and accuracy) and academic conventions.

### 5.3. The statistical analysis of the grades

First, the mean grades obtained by the students in each course prior to the final report were calculated and compared. The mean grade in the TBL course was 67%, and in the EBL course 70.2%.  These mean grades do not include the grades obtained for the final

report. To determine the contribution of the report, the difference between the percentage of the total grade that was obtained prior to the report and the percentage of the total grade that the students obtained after the final report, were compared. This value represents the difference in the learning gains in the two groups.

If, for example, a student's average in the course prior to the final report, was 70% (she obtained 21.25% out of 30% of the total), and if for the final report she received 80% (the report was worth 20% of the course total and she received 16%), this raised her average grade to 76.2%, and her standing improved by 6.25%.

The distribution of the students' grades is shown in Fig. 6. In the TBL course, 15 students (46%) improved their standing after writing the report, while 17 students' standing (52%) worsened. In the EBL course 33 students (94%) improved their standing and only 2 students' standing worsened. This suggests that experiential learning had stronger positive impact on the final results than text-based learning.
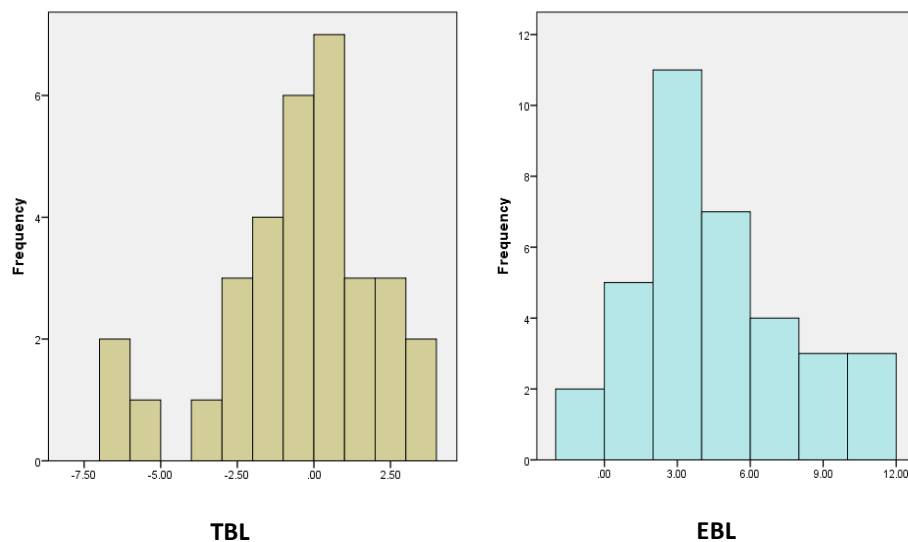


**TBL**              **EBL**

Fig. 6 Histograms of relative grade difference for the TBL course and the EBL course

### 5.4. Analysis

There are more than 25 data points in each sample (32 for TBL and 35 for EBL). The mean and standard deviation for the TBL and EBL groups is, respectively, 0.62 and 2.48, and 4.34 and 3.13.

Given the above and the fact that both groups may be considered as two independent samples drawn from the student population, a $t$-test for independent samples was used to verify the hypothesis. From the Levene's test for equality of variances, a *p-value* = 0.094 was obtained, which is greater than the typically assumed α level of 0.05. Therefore, the null hypothesis that the variability of the two groups is equal is not rejected and the assumption of the $t$-test has been met. The result of the $t$-test indicates that the means

from the two samples are significantly different ($p \leq 0.001$); the mean difference is 4.96 with standard deviation of 0.69 - an average grade increase of almost 5%.

The difference between the $p$-value and the α level (0.094 vs. 0.05) may be considered small. Therefore, a $t$-test where variances are not assumed to be equal may be more appropriate. The $p$-value and the mean and variance values are, however, identical for equal and not equal variance values. Furthermore, running a non-parametric Mann-Whitney test for independent samples, which does not require normal distribution and large samples, also confirmed the hypothesis ($p \leq 0.0001$).

The statistical analysis of the grades confirms the hypothesis that sustained-content instruction enhanced by experiential learning results in better learning outcomes than learning based primarily on input from texts.


6. DISCUSSION

The comparison of the learning outcomes in the two courses was based on the final report's contribution to the students' grades. In both cases, the students were given instructions on how to write a formal report. In the introduction, they explained specific concepts related to the theory presented in the first half of the course, then they described the case, analyzed the case (TBL course) or online negotiation experience (EBL course) using the new concepts. It was an open book assignment and learners were expected to use all resources introduced during the course. The reports were evaluated on content, (including critical thinking), language and academic conventions.

Typically, the grades for the final report do not significantly improve students' standing. This was the case with the TBL group where only fifteen out of 32 students received slightly higher grades that improved their standing. In contrast, 33 students out of 35 in the EBL group received higher grades and improved their standing. Furthermore, the grades for the report obtained by the EBL group were unusually high, and this prompted the instructor to ask the students informally why they had done so well. They gave two reasons, one that the report was based on real experience and the other that they did a lot of writing in the course. Since both sections did the same amount and types of writing, the first reason is worth discussing as it raises the question of the benefits of experiential learning, in this case, with the help of a web-based negotiation support system.

### 6.1. Motivation, involvement, and learning

The significantly better learning outcomes in the EBL course than in the TBL course suggest that analysing a personal experience is a more effective learning strategy than analysing cases described in textbooks.

Role-playing activities, both in language and in negotiation courses, have been credited with increasing intrinsic motivation. Shinde and Shinde (Shinde & Shinde, 2022) state that role-plays develop such skills as "initiative, communication, problem-solving, self-awareness and working cooperatively" (p.5). A body of research on role-playing simulations in negotiation courses shows that carefully planned role-plays get students engaged "behaviourally, cognitively and emotionally" (Poitras, Stimec, & Hill, 2013). The negotiation journal entries testify to the fact that the majority of students carefully analyzed their counterpart's offers with the help of the system and carefully planned their responses. The entries show that many were troubled when they did not receive a

response within a day, and when the counteroffer was not to their liking they were genuinely upset, annoyed or even angry. Below are a few excerpts from a negotiation journal: *What is he thinking? This is the worst offer I have received so far; After two days of waiting… I was so worried… It's pretty stressful and I felt anxious waiting for the message; I will wait until tomorrow to think; It took me about two days to reach a decision regarding the offer that Mr. Mosico sent me* (language edited by MK).

Another factor that may have contributed to higher grades on the final report in the EBL course could have not only been the interaction with the counterpart, but also the interaction with the system and its decision aids over an extended period of time. While negotiating, the students were immersed in a rich content and language input, which created conditions for natural language acquisition (Krashen, 1987). The asynchronous aspect of the Inspire negotiations gave learners "extended time and opportunity to react, respond, and interact with material and each other" (Jaffee, 1998) and reflect, and thus created conditions for both language acquisition and language learning.

## 6.2. Student autonomy

Giving students autonomy through assignments such as project work and reflection is important because the skills that they acquire prepare them for life-long education (Gocić & Jankovic, 2022).

The students in the EBL course had full responsibility for conducting online negotiations, without the teacher supervising their activities. However, as documented in relevant academic literature, a methodology that emphasizes learners' control over the learning process and outcomes can be a challenge for both students and teachers. Knutson (2003) provides examples of criticism of experiential learning in the second language classroom. Some educators question the practicality of the projects. Others refer to classroom time constraints, and challenges with creating a comfortable and relaxed yet learning conducive atmosphere. Still others point out difficulties with assessing the outcomes. Experiential learning projects have also been criticized for being frivolous and poorly controlled, particularly when it comes to the use of mother tongue.

The Inspire system, which has been designed to train students and professionals in the art of negotiating, is rigorously structured. Nevertheless, it is very easy to use, and it gives its users full autonomy over the process. The teacher is "invisible" to the students as the system takes over practically all of the responsibilities for the running of the project. All materials are available online and the Inspire team matches the students, assigns roles and monitors interactions. Users are notified by email when their counterpart sends them an offer or a counteroffer. If they procrastinate, they are reminded by the Inspire system to respond. The negotiations take place outside of the classroom, so there are no classroom time constraints. The negotiations are anonymous and asynchronous, thereby removing the element of playing it "safe" often present in classmate-to-classmate negotiations. As far as creating a comfortable atmosphere is concerned, the student can choose the best time to respond and take as much time as he or she needs to formulate offers and messages. Finally, there is no need to control the use of mother tongue, as it simply cannot happen in these anonymous international negotiations, for which an English website is used. In terms of assessment, a variety of assignments can be given (e.g., a negotiation journal, a reflection on the process and outcomes, an assessment of technologies used, and a report).

All of this being said, the process was not without glitches. A few students forgot their password and could not access the site; a few were checking a wrong mailbox. In the first two days of negotiations, about 20% of students had to be reminded by the system to negotiate because their counterparts were getting anxious; one student had an unresponsive counterpart but did not notify the Inspire group for three days. However, these were minor problems, and an important part of learning how to use technology.


## 7. CONCLUSIONS

This study reported on a successful adoption of a negotiation support system to an EAP course and the learning benefits of direct experience. The paper also attempted to show that this teaching and training system has strong similarities to experiential learning models used in the second language classroom. It further explained that it does not only fit the ESP/EAP content-based instructional models, but it also enhances learning by promoting learner autonomy, critical thinking and academic language development. The participation in online negotiations required that the learners take full responsibility for the process and the outcomes. The focus of the negotiations was to resolve differences between the two negotiating parties. While negotiating, the participants showed emotional and cognitive involvement which made the experience both meaningful and authentic. Furthermore, the asynchronous aspect of the negotiation and the fact that the participants had access to the records of their communication, encouraged reflection. All these aspects of the experiential learning project led to enhanced learning outcomes thus supporting the claim that learning by doing benefits language acquisition.

The study has some limitations. One limitation is the use of different themes in each group. It is possible that the topic of innovation diffusion was less interesting or more difficult for the students than the topic of decision making and negotiations. A comparison of the learning outcomes of TBL and EBL groups both working on the theme of decision-making and negotiations could verify our results. Another limitation is the sample size – 32 and 35 are small samples. To verify the results a larger sample and more student groups could be analysed in the future.

Despite its limitations, the study showed the potential of incorporating web-based systems that support experiential learning for teaching EAP and ESP. The presented model depicts the importance of sequencing academic content tasks that build on each other allowing learners to accumulate knowledge and language and prepare them to engage in a meaningful, authentic communication. It also showed the importance of using reflection as an effective learning tool that helps develop critical thinking and analysis, skills necessary for academic success.


*Please note that the service offered by the INSPIRE team was disrupted by a sudden death of the system's creator Prof. Gregory Kersten. However, a new negotiation system based on INSPIRE, i.e., eNego is available at web.ue.katowice.pl/enego/.

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